

surgical procedures among younger patients for the management of DD. **METHODS:** Using a nationwide commercial claims database, a retrospective cohort was identified who had undergone LC (n = 2095) or OC (n = 5971) between 4th quarter, 2005 through 1st quarter, 2009. 2000 U.S. Census data was used to calculate age-adjusted temporal trends in the overall surgical procedure and logistic regression was used to determine the time trends in each surgical procedure, adjusting for age, gender, and the type of benefit plan. **RESULTS:** A total of 8,066 surgical procedures were performed during the study period (mean age = 53 ± 11, 55.7% Male). Quarterly mean number of surgical procedures(LC+OC) performed was 576 (SD = 39) and the annual mean number of LC+OC from 2006 to 2008 was 2297 (SD = 107). Quarterly age-standardized surgical procedures(LC+OC) for DD declined by 9.26% for patients younger than 45, whereas overall surgical rate increased by 3.2% for older patients. The odds of having a LC over OC declined by 8% each consecutive quarter (95% CI 0.91, 0.93) while controlling for other covariates. **CONCLUSIONS:** Data suggest that there was a slight decline over time in surgical procedures for younger patients. The reasons for the decline in surgical procedures for younger patients may be due to recent studies suggesting that DD is not more aggressive in younger patients as initially reported, and that the conservative medical treatment may be more appropriate with this population.

PGI7

LOW PREVALENCE OF HEPATITIS C VIRUS (HCV) DIAGNOSIS IN US HEALTH CARE DATA

Iwasaki K¹, Velez FF², Fitch K¹, Pyenson B¹

¹Milliman Inc., New York, NY, USA, ²Vertex Pharmaceuticals Incorporated, Cambridge, MA, USA

OBJECTIVES: The National Health and Nutrition Examination Survey (NHANES) estimates chronic HCV infection prevalence at 1.3% of the US population or ~3 million individuals, with a peak HCV antibody prevalence of 4.3% for those born in the 1950s. From NHANES we can assume that 79.7% of HCV antibody positive patients will not clear the virus; therefore we expect to observe 3% chronic HCV infection in this peak population. **METHODS:** Patients diagnosed with HCV (ICD-9 codes 070.41, 070.44, 070.51, 070.54, 070.70, 070.71, V02.61) between 2002 and 2006 were identified in MedStat commercial health insurance claims. We calculated age-sex prevalence of diagnosis by birth year. A log-regression model was constructed to examine the relationship between prevalence of HCV diagnosis and number of observation years. **RESULTS:** The prevalence of patients with a HCV diagnosis in 2006 was 0.12%. The prevalence of patients with HCV diagnosis was consistent in each year's claims, peaking in those born between 1950–1955. Longitudinal data across five years demonstrated increasing diagnosis rates with additional years of observation, according to a log function. Modeled for 10 years of observation, total diagnosed prevalence was estimated at 0.29% (R² = 0.99); peak prevalence was 1.35% for males and 0.64% for females for those born in the early 1950s. **CONCLUSIONS:** In each year examined, the claims-based prevalence of an HCV diagnosis was about 10% of the NHANES estimated prevalence (0.12% vs. 1.3%). Although diagnosed HCV prevalence increased with years of observation, the 10-year modeled diagnosis prevalence was only 22% of NHANES estimated prevalence. Like in NHANES, peak prevalence of HCV in claims was observed in patients born in the 1950s. This suggests that many patients have long-standing HCV infection and are at possible risk of decompensation. Further research is warranted to examine whether HCV-related advanced liver disease is more commonly coded in claims data.

GASTROINTESTINAL DISORDERS – Cost Studies

PGI9

A BUDGET IMPACT MODEL TO EVALUATE MEDICATION PERSISTENCE AND ASSOCIATED HEALTH CARE COSTS

Cohen RD¹, Yen L², Nichol MB³, McDermott JD⁴, Sharma G⁴, Knight TK³, Schaefer C⁴, Hodgkins P²

¹The University of Chicago Medical Center, Chicago, IL, USA, ²Shire Pharmaceuticals, Wayne, PA, USA, ³University of Southern California, Los Angeles, CA, USA, ⁴Covance Market Access Services Inc., Gaithersburg, MD, USA

OBJECTIVES: Low persistency for oral 5-ASA drugs is associated with increased risk of relapse of ulcerative colitis(UC) and subsequent costs. We constructed a one-year budget impact model to compare annual all-cause direct incremental costs(IC) of treatment for the health plan(HP) per mild-to-moderate UC patient using oral 5-ASA drugs and associated persistency rates(PR). **METHODS:** Assuming a budget holder's perspective for a one-year horizon, the model analyzed the impact of PR on total UC related all-cause direct IC. PRs for 5-ASA drugs(mesalamine CR[CRM] 250mg 7% & 500mg 10%, balsalazide disodium[BD] 10%, olsalazine[OLS] 10%, mesalamine DR[DRM] 9%, multi matrix system mesalamine[MMX] 20%) were derived from published literature. UC patients within the HP were distributed to drugs based on September 2009 market share data and classified as persistent if they refilled within a timeframe of up to twice the duration of their prescription. Annual UC-related pharmacy costs were calculated using net wholesale acquisition cost, and additional all-cause direct ICs for patients with/without relapse were cited from published literature. Sensitivity analyses varying net drug costs and PRs were performed to determine impact on health care costs. **RESULTS:** Average annual all-cause UC costs per patient were: \$13,135 CRM-250; \$13,065 CRM-500; \$12,914 BD; \$12,804 OLS, \$12,688 DRM; \$12,255 MMX. Inpatient costs were lower for MMX(\$5,667) as compared to

market leader(DRM;\$6,216) and lowest priced drug alternative(OLS;\$6,343). Sensitivity analyses indicated higher savings/patient for MMX than DRM(\$462 vs. \$30, respectively). The primary driver for inpatient cost differences was the frequency of relapse reduced by persistency. A health plan with 1 million covered lives(2,300 UC patients) can save \$401,000(\$0.03 per member/month) by switching 50% of UC patients to MMX. **CONCLUSIONS:** This analysis illustrates the impact of medication persistence on reduction of UC relapse and associated health care costs. Health plans may achieve savings by including drugs with high PRs in their formulary.

PGI10

PATIENT FINANCIAL BURDEN, SURGICAL COSTS AND REIMBURSEMENTS FOR OPEN AND LAPAROSCOPIC COLECTOMY PROCEDURES IN DIVERTICULAR DISEASE

Chung JK, Knight TK, Nichol MB

University of Southern California, Los Angeles, CA, USA

OBJECTIVES: Colectomy is a standard procedure in complicated colonic diverticular disease (DD) including diverticulosis and diverticulitis. Although laparoscopic colectomy (LC) has demonstrated some clinical advantages over open colectomy (OC), the true financial burden, cost and reimbursement structures between the two surgical procedures remain unclear. The purpose of this study was to compare patient financial burden, direct surgical costs and reimbursements for OC and LC procedures in DD. **METHODS:** Nationwide commercial claims database from 2003 through 2007 was used to identify 1,614 patients who had undergone OC (n = 1327) or LC (n = 287) for DD. Patient financial burden (defined by out-of-pocket [OOP] costs including co-pay, deductible and coinsurance), direct surgical costs, reimbursements and cost-to-charge ratios for OC and LC were compared using the Student's t-test and chi-square test where appropriate. **RESULTS:** OC and LC groups differed with respect to mean age (60 and 64 years, respectively; p < 0.001) but did not differ in male/female ratio. OOP costs were significantly greater for OC (\$410 vs. \$350 for LC; p < 0.001). Both surgical costs and the reimbursements per case were significantly less for OC (\$4231 ± 98 and \$1412 ± 35, respectively) than LC (\$5246 ± 231 and \$1809 ± 80 respectively; both p < 0.001). Cost-to-charge ratios were the same for both surgical procedures (0.38). **CONCLUSIONS:** This analysis demonstrated that patient financial burden, as assessed by OOP costs, was moderately greater for open colectomy, but the direct costs and reimbursements of OC were significantly lower than LC. However, low surgical costs may be offset by potential increases in length of hospital stay due to longer recovery time for OC. Understanding differences in cost structures may be helpful in further investigations of the cost-effectiveness of these two surgical procedures in diverticular disease.

PGI11

PEDIATRIC HOSPITALIZATIONS FOR INFLAMMATORY BOWEL DISEASE: RESULTS FROM 2006 KIDS' INPATIENT DATABASE

Tundia N, Heaton PC, Kelton CM

University of Cincinnati, Cincinnati, OH, USA

OBJECTIVES: Crohn's Disease (CD) and Ulcerative Colitis (UC), collectively termed Inflammatory Bowel Disease (IBD), are associated with hospitalizations, surgical procedures, and long-term medical follow up. The objectives of the current study were to quantify the national pediatric IBD burden in 2006 and stratify by demographics by determining the (1) number of hospitalizations; (2) number of days spent in the hospital; and (3) hospitalization costs. **METHODS:** The 2006 Kids' Inpatient Database was used to examine IBD in hospitalized children and adolescents 20 years and younger with a primary diagnosis of either CD or UC. Frequency of discharges, the total and mean length of stay (LOS) and costs were calculated, and stratified by various patient and hospital characteristics such as age, gender, expected primary payer, patient income, surgery status, teaching status, hospital size, location and region. **RESULTS:** In 2006, there were 10,777 IBD-related pediatric visits, of which 6,599 were due to CD and 4,178 were due to UC. For CD and UC, respectively, there were 37,175 and 27,810 days spent in the hospital; mean LOS was 5.63 and 6.66 days. The total and mean costs for CD were \$66.3 million and \$10,176, respectively. The total and mean costs for UC were \$48.6 million and \$11,836, respectively. For CD, 0–5 year old patients had the highest mean LOS (8.10 days) and mean cost (\$13,894), while, for UC, 11–15-year old patients had the highest mean LOS (7.49 days) and mean cost (\$13,407). Patients with Medicaid had a higher mean LOS and cost than those with private insurance. Surgery increased mean LOS over 3 days and almost doubled the cost for IBD hospitalizations. **CONCLUSIONS:** IBD is a burdensome illness. Future research will determine if newer treatment options can reduce hospitalizations.

PGI12

FUNCTIONAL DYSPESPSIA DECREASE PRODUCTIVITY AND INCREASED MEDICAL COSTS

Brook RA¹, Kleinman NL², Choung RS³, Melkonian AK⁴, Smeeding J⁵, Talley NJ⁶

¹The JeSTARx Group, Newfoundland, NJ, USA, ²HCMS Group, Paso Robles, CA, USA,

³Mayo Clinic, Rochester, MN, USA, ⁴HCMS Group, Cheyenne, WY, USA, ⁵JeSTARx Group,

Dallas, TX, USA, ⁶Mayo Clinic Jacksonville, FL, Rochester, MN, USA

OBJECTIVES: Functional dyspepsia is a common, morbid condition but data are limited on the indirect and direct costs for employees with functional dyspepsia or on its impact on productivity. Few data on absenteeism no objective information are available. This study aimed to assess functional dyspepsia's incremental health benefit costs and effects on absenteeism and work output (productivity). **METHODS:** We performed a retrospective analysis of payroll data and adjudicated health insurance